U.S. Department of Interior
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Roseburg District, Oregon

Basin Shield Commercial Thinning and Density Management

Decision Document

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U.S. Department of Interior
Bureau of Land Management
Roseburg BLM District, Oregon

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SECTION 1 – THE DECISION

Introduction

Basin Shield is a commercial thinning and forest density management project identified in the Upper Umpqua Watershed Plan (EA # OR -104-02-09) and its subsequent Decision Record (October 8, 2003). This decision is consistent with the Roseburg District Record of Decision and Resource Management Plan (ROD/RMP), adopted in June 1995, and the Upper Umpqua Watershed Plan (June 17, 2003). The implementation of this decision will meet the following objectives from the Upper Umpqua Watershed Plan (pg. 2):

- For mid seral forests on BLM lands designated for wildlife and fish needs, accelerate stand diversity and development of late-successional characteristics such as large crown ratios, larger lateral branches, multiple canopy layers, and a greater number of larger conifers while maintaining a healthy ecosystem, and

- For mid seral forests on BLM lands designated for commercial harvest needs (General Forest Management Areas, Connectivity/Diversity Block), maintain healthy growth rates and contribute timber for the local and regional economy while protecting certain forest components for wildlife.

Decision

It is my decision to authorize implementation of the Basin Shield Commercial Thinning and Density Management timber sale in Sections 17 & 18, T. 24 S., R. 07 W., W.M. following the project design features (PDFs) established in the Upper Umpqua Watershed Plan as adjusted in the Decision Record. This timber sale is located within the General Forest Management Area (GFMA), Riparian Reserve (RR), and the Late-Successional Reserve (LSR) land-use allocations. The units that will be treated are second-growth forested stands that range in age from 39-43 years old. Basin Shield will provide approximately 1,563 MMBF of merchantable timber available for auction. The volume is within the GFMA and LSR. This decision is subject to administrative remedy under 43 CFR § 5003.2 and 5003.3. The description of the action authorized by this decision is described below.

Timber Harvest

Five units (5) consisting of approximately 120 acres of mid-seral forest, aged 39-43 years, will have commercial thinning and density management treatments applied (Table 1). The average tree size in this unit is 12.4 inches diameter breast height (DBH).

An additional two acres will be cleared or brushed for road and spur right-of-ways to access the harvest areas. Therefore, the Basin Shield project is a total of 122 acres.

Table 1. Timber Yarding Summary.

Project Unit	Yarding Method (acres)									Total (acres) **
	Aerial			Cable			Ground*			
	LSR	RR	GFMA	LSR	RR	GFMA	LSR	RR	GFMA	
1	-	5	1	-	-	-	-	-	-	6
2	-	-	-	-	6	7	-	1	6	20
3	-	-	-	23	4	7	14	-	-	48
4	-	15	10	-	-	-	-	-	-	25
5	-	4	5	-	-	-	-	6	6	21
Total	-	24	16	23	10	14	14	7	12	120

* Up to 10 acres of additional, incidental ground-based yarding may occur in areas designated for cable logging.

** Approximately 2 acres right-of-way yarding will occur due to new construction.

Treatment Prescription

Commercial thinning and density management will be used to reduce the number of trees in even-agedstands dominated by Douglas-fir. Trees will primarily be removed from the suppressed and intermediate canopy classes, although some co-dominant and dominant trees could be removed where necessary to meet density objectives. The harvest units are marked to retain approximately 80-120 square feet of basal area (moderate and high residual density).

The prescription for tree marking was designed to create variable spacing between the remaining trees. This was accomplished by occasionally leaving clumps of trees, clearing around large limbed trees, and varying the spacing to select a tree of a particular species and/or growth form. Existing snags will be protected to the greatest extent possible by marking all snags greater than six inches DBH for retention.

Trees selected for retention are dominant and co-dominants from a variety of conifer and hardwoods species greater than six inches DBH. Some smaller shade tolerant trees such as western red cedar and western hemlock may be marked to maintain the existing species diversity. Trees selected for retention have at least a 30 percent live crown ratio so that live crown expansion and accelerated diameter growth will be more likely following treatment (Daniel, et. al. 1979).

Variable no-harvest buffers have been placed around all streams. There is one fish-bearing stream (Basin Creek) immediately adjacent to treatment unit 4. No-harvest means that some trees may be felled in these areas to create or enhance habitat but trees will not be commercially removed. Streams in the project area include fish bearing streams downstream of the harvest units that are adjacent to the haul route (Basin Creek and Umpqua River) (see Appendix F, Table 3).

There are approximately 306 snags 8-19 inches DBH and five snags 20 inches DBH or greater. The need for recruitment of additional green trees as snags and coarse woody debris to meet criteria established in the project design features will be assessed within two years of the completion of harvest activities (pgs. 7-8).

Timber Cruising
This project will yield approximately 1,563 MMBF of timber available for auction.

A small amount of additional timber could potentially be included as modifications to this project. These additions will be limited to the removal of individual trees or small groups of trees that are blown down, injured from logging, are a safety hazard, or trees needed to facilitate the action. Historically, this addition has been less than ten percent of the total sale quantity.

Firewood
Firewood cutting and salvaging of logging debris (slash) will occur in cull decks, logging landings, and near roads after the commercial thinning and density management activities have been completed.

Timber Yarding
The action will require approximately 40 acres of aerial yarding, 47 acres of skyline cable yarding, and 33 acres of ground-based yarding. Up to 10 acres of additional, incidental ground-based logging within the proposed units may be necessary (i.e. removal of guy line anchor trees, isolated portions of units, etc.) but will be limited to gentle slopes (less than 35 percent), during the dry season.

Fuel Treatment
Slash within 50 feet of logging landings will be machine-piled, burned (under the direction of a written site specific prescription or "Burn Plan"), or spread over natural surfaced roads (the first 100 feet of spurs 1 and 2 and the subsoiled bed of spur 3). Approximately five acres of landing piles will be burned. Remaining fine fuels generated during the commercial thinning and density management process will be scattered throughout the treatment units. The portion of unit 5 adjacent to private lands, approximately three acres, will also have slash hand piled and burned throughout the unit to provide additional fire safety for the adjacent private land owner.

Timber Hauling
Approximately 3.62 miles of rocked road and 0.29 miles of unsurfaced road will be used for the hauling of timber, for a total of 3.91 miles of haul route. A total of 3.62 miles of existing road will be renovated (brought back to its original design) and utilized for wet-season haul and approximately 0.29 miles of new road will be constructed, but not surfaced, and used for dry-season haul.

Road Activities
The action will include dry season and wet season logging activities and existing roads will be used to the greatest extent practical. Following the project design features described on pg. 5, road construction, renovation, and decommissioning will be restricted to the dry season (normally May 15 to Oct. 15).

Construction
Approximately 0.29 miles of new spurs will be constructed. New spur construction will take place within the density management unit. The new spurs are numbered spur 1 thru spur 3. The operator may rock spurs 1, and 2 at their own expense.

Renovation
Approximately 3.62 miles of existing roads will be renovated. Road renovation will consist of installing or maintaining drainage structures (culverts and drainage ditches), reshaping the road surface, replenishing road surface with crushed rock where deficient, and brushing road shoulders. The roads that will be renovated are numbered 24-7-17.0, 24-7-17.1, 24-7-17.2, 24-7-17.4, 24-7-17.5, 24-7-17.8, and 24-7-18.1 segments A and B.

Culverts
A total of two new culverts will be installed, including one on the 24-7-17.1 road and the other on the 24-7-18.1 road. Additionally, eleven culverts will be replaced on the 24-7-17.1 road, one on the 24-7-17.2 road, two on the 24-7-17.4 road, one on the 24-7-17.8 road, and two on the 24-7-18.1 road. Ten of these culverts are at road stream crossings. Of these ten culverts, four are on perennial 3rd order streams (Basin Creek and a major tributary to Basin Creek), and the other 6 are on intermittent 1st order streams. There are no fish passage culverts being replaced as part of this sale.

Decommissioning
Spurs numbered 1, 2, and 3 will be blocked with a trench barrier. The spurs will be blocked after water bars are installed and the surface is mulched with logging slash where available, or with weed free straw when logging slash is not available. In addition, spur number 3 will be subsoiled before blocking. Approximately 1.3 miles of existing and new skid trails will be subsoiled in the ground based harvest areas (Appendix C, pg. 11).

Compliance and Monitoring

Compliance with this decision will be ensured by frequent on the ground inspections by the Contracting Officer's Representative. Monitoring will be conducted as per the direction given in Appendix I of the RMP (pgs. 189-209).

SECTION 2 – PROJECT DESIGN FEATURES

The following project design features and best management practices are adopted as part of the implementation of this decision to reduce adverse environmental impacts. They are designed to avoid, minimize or rectify impacts on resources. These measures will also help projects meet the objectives of the Aquatic Conservation Strategy.

Seasonal Restrictions

Seasonal restrictions will be applied based on consultation criteria to reduce impacts to federally listed species and in accordance with best management practices to reduce

sedimentation impacts to aquatic species, and to reduce soil compaction in order to maintain soil productivity. These restrictions are described below.

Project Design Features to Minimize Effects to Wildlife Threatened & Endangered Species

Project design features for the Basin Shield Commercial Thinning and Density Management were based on project design criteria from the following documents:

- Letter of Concurrence (LOC) regarding the *Reinitiation of consultation on Roseburg District Bureau of Land Management FY 2005-2008 Management Activities* (Ref. # 1-15-05-I-0511 [June 24, 2005]), and the
- *Upper Umpqua Watershed Plan Decision Record* (October 8, 2003)**.**

➢ Northern Spotted Owl

Disturbance

There are no known spotted owl sites, activity centers, or unsurveyed suitable habitat within 65 yards of the unit boundary. Therefore, seasonal restrictions for spotted owls are not necessary.

Habitat

Suitable Habitat

- No suitable spotted owl nesting, roosting, and foraging habitat will be removed or modified by this project.

Dispersal-only Habitat

- Approximately 122.0 acres of dispersal-only habitat will be modified. A minimum average canopy closure of 40-60 percent will be maintained in thinned stands. Therefore, these stands are expected to retain dispersal function because post-project canopy cover will not fall below 40 percent.

Critical Habitat

- Of the 122.0 acres of dispersal-only habitat, 38.5 acres is designated critical habitat (CHU OR-58) for the northern spotted owl. Thinning treatment will degrade 38.5 acres of critical habitat. However, primary constituent elements present in dispersal habitat will persist post-treatment (USDI 2005).

➢ Marbled Murrelet

Disturbance

This project is within the Marbled Murrelet Inland Management Zone 1 (within 0-35 miles of the coast). There are no known occupied sites within 100 yards of the proposed project area. However, there is unsurveyed suitable habitat within 100 yards of units 2, 3, 4, and 5. Therefore, seasonal restrictions from April 1st thru August 5th and daily operating restrictions from August 6th thru September 15th are necessary for marbled murrelets northwest, east, and southeast of the units' boundaries. Seasonal restrictions will not apply to unit 1.

Helicopter use would require seasonal restrictions from April 1st thru August 5th and daily operating restrictions from August 6th thru September 15th within 440 yards (0.25 mile) of suitable murrelet habitat.

Habitat

- In accordance with the Letters of Concurrence from the U.S. Fish & Wildlife Service for activities on the Roseburg District (Ref. # 1-15-05-I-0511 [June 24, 2005]), surveys for potential structure were conducted (Oct. 2006) following Residual Habitat Guidelines (pgs. 68-69, Plan Maintenance for FY2004, *Annual Program Summary & Monitoring Report – FY2005*). Eight trees meeting the criteria for potential structure for marbled murrelets were discovered within the original boundary of the unit.

  After reconfiguration of unit boundaries, six of the eight platform trees are located outside of the units. Of the remaining two trees, one is located at the east edge of unit 5 and one is located at the south edge of unit 3. Interlocking canopies within at least half-site potential tree height of each of the two scattered trees will be maintained to retain local conditions of platform trees.

- There is suitable marbled murrelet habitat adjacent to the units, along the, west boundary of unit 2, west and northeast boundaries of unit 3, southeast boundary of unit 4, and portion of the east boundary of unit 5. Mid-seral stands adjacent to suitable habitat will be treated with a lighter thinning prescription, maintaining interlocking canopies within at least half-site potential tree height from suitable habitat.

  Critical Habitat

- Of the 122.0 acres proposed for treatment, 38.5 acres is designated critical habitat (CHU OR-4-*e*) for the marbled murrelet. Thinning treatment will modify 38.5 acres of recruitment habitat (*habitat currently unsuitable, but capable of becoming suitable in the future* (FR 61:26256-26320). Primary constituent elements will not be removed and will continue to persist post-treatment (USDI 2005).

➢ Snags

Late-successional Reserve

Snags will be retained or created in the following manner in accordance with direction from the *Upper Umpqua Watershed Plan Decision Document* (pgs. 6-7; Oct. 8, 2003):

- Snags greater than 20 inches DBH and greater than 16 feet tall were located and counted on a stand-by-stand basis. Currently, there are approximately five snags meeting the above criteria based on field surveys.
- Tree marking was designed to protect existing snags to the extent possible.
- Those that pose a safety concern will be cut and left for coarse woody debris.
- Required number of snags for 2 acres of south slopes and 35 acres of north slopes is 2 and 105, respectively. Currently there are approximately 10 snags on south slopes and 95 snags on north slopes, ranging in size from 8 to 24 inches in diameter at breast height. South slopes are sufficient in snag density; however, there is a total deficit of 18 snags on north slopes within the Late-Successional Reserve portion of the proposed project area.

- Within two years of the completion of harvest activities, if there are less than three snags per acre on north slopes and one snag per acre on south slopes, snags will be created on a per acre basis from the larger diameter class of existing live trees to meet the minimum interim needs. Trees damaged from the harvest will be preferentially selected for girdling and recruited as snags.

Riparian Reserves
Within Riparian Reserves, snags will be retained or created in the following manner in accordance with direction from the *Upper Umpqua Watershed Plan Decision Document* (pgs. 6-7; Oct. 8, 2003):

- Snags greater than 20 inches DBH and greater than 16 feet tall were located and counted on a stand-by-stand basis. Currently, there are approximately five snags meeting the above criteria based on field surveys.
- Tree marking was designed to protect existing snags to the extent possible.
- Those that pose a safety concern will be cut and left for coarse woody debris.
- Within two years of the completion of harvest activities, if there are less than three snags per acre on north slopes and one snag per acre on south slopes, snags would be created on a per acre basis from the larger diameter class of existing live trees to meet the minimum interim needs. Trees damaged from the harvest would be preferentially selected for girdling and recruited as snags. The 41 acres of Riparian Reserve are generally a north slope; therefore, the target number of snags is 123.

General Forest Management Area
Within the upland portions of the harvest units (i.e. outside of Riparian Reserves), snags will be retained in the following manner:

- Snags greater than 20 inches DBH and greater 16 feet tall were located and counted on a stand-by-stand basis. Currently, there are approximately five snags meeting the above criteria based on field surveys. The residual stand following harvest will provide a pool of candidate trees for future snag recruitment and additional snags may be created incidentally through the harvest operations.

➢ Coarse Woody Debris

Late-Successional Reserve
Coarse woody debris will be retained or created in the following manner in accordance with direction from the *Upper Umpqua Watershed Plan Decision Document* (pg. 7; Oct. 8, 2003):

- All existing coarse woody debris will be retained.
- Within two years of the completion of harvest activities, up to two trees per acre (approximately 74 trees) will be recruited as additional coarse woody debris. Trees that have fallen since the completion of harvest activities will be credited to recruitment of coarse woody debris. Trees damaged from the harvest will be preferentially selected for falling and recruited as coarse woody debris.

Riparian Reserves
Within Riparian Reserves, coarse woody debris will be retained or created in the following manner in accordance with direction from the *Upper Umpqua Watershed Plan Decision Document* (pg. 7; Oct. 8, 2003):

- All existing coarse woody debris will be retained.
- Within two years of the completion of harvest activities, up to two trees per acre (approximately 82 trees) would be recruited as additional coarse woody debris. Trees that have fallen since the completion of harvest activities will be credited to recruitment of coarse woody debris. Trees damaged from the harvest would be preferentially selected for falling and recruited as coarse woody debris.

General Forest Management Area
Within the uplands (i.e. outside of Riparian Reserves), coarse woody debris will be retained or created in the following manner in accordance with RMP guidance:

- During partial harvests early in the rotational cycle it is not necessary to fall the larger dominant or co-dominant trees to provide coarse woody debris logs (pg. 53, Plan Maintenance for FY1996, *Annual Program Summary & Monitoring Report – FY2005*).
- There is approximately 158 linear feet/acre of decay class 1 or 2 coarse woody debris that is typical of the development cycle of the stand (i.e. at least 8-11 inches diameter). The residual stand following harvest will provide a pool of candidate trees for future coarse woody debris recruitment and additional wood debris may be created incidentally through the harvest operations.

Project Design Features to Minimize Erosion and Sedimentation Effects to Aquatic Species

- To protect aquatic resources within riparian areas, a variable width streamside no-harvest buffer has been established along all streams and wet areas. The variable buffer width is 10 to 60 feet from the outer edge of the active stream channel for all non-fish bearing streams and 100 feet minimum for all fish bearing streams There is one fish bearing stream (Basin Creek) within the treatment area. The buffer width varies to include areas of instability, wide areas of riparian vegetation, or sensitive areas identified during site review. Variation in the non-fish bearing stream buffer was based on site level review of soils, hydrology, fisheries, vegetation, and riparian habitat:
  - Soil was reviewed for the presence or absence of steep slopes, potential erosion, sedimentation, and soil displacement issues.
  - Hydrology was reviewed for overland and groundwater flow conditions (perennial, seasonal, ephemeral classification, wetlands, seeps, and springs).
  - Fisheries was reviewed for the influence non-fish bearing streams have on downstream aquatic habitat.
  - Vegetation was reviewed for diversity and crown characteristics (ground cover, vegetative composition, stream shading, etc).
  - Riparian habitat was reviewed for the presence of key habitat components (aspect, vegetative composition and structure, snags, downed wood, etc).

- At the minimum, one-tree retention has been maintained along the stream bank for bank stability. Minimum buffer widths have been used primarily on first and second order ephemeral or highly interrupted intermittent streams. These streams lack riparian vegetation and riparian habitat components, soil stability issues, and potential impact to downstream fisheries. Management within the buffer could include selected felling

and/or girdling of trees where doing so will benefit riparian habitat. Trees will not be commercially removed from this buffer area.

- Stream channels and riparian habitat will be protected from logging damage by directionally felling trees that are within 100' of streams away from the streams and yarding logs away from or parallel to the streams.

- Yarding corridors parallel to non-fish bearing streams will be at least 40 feet way from the edge of the active stream channel and will be avoided along swale bottoms.

- Skyline yarding is required where cable logging is specified. This method will limit ground disturbance by requiring at least partial suspension during yarding. For all cable yarding, corridors will be less than 15 feet in width.

- Partial suspension and waterbarring yarding trails that are excessively furrowed will reduce the risk of slope failure and limit erosion. Partial suspension lifts (i.e., suspends) the front end of the log during in-haul to the landing, thereby lessening the "plowing" action that disturbs the soil. In some limited, isolated areas partial suspension may not be physically possible due to terrain or lateral yarding. Excessive soil grooves that occur from "plowing" action will be hand waterbarred and filled with limbs or other organic debris.

Project Design Features to Minimize Effects of New Road Construction and Road Use

- Roads will be located on ridge tops and on stable slopes. All renovation and decommissioning will occur during dry periods of the year, generally between May 15 and the onset of regular fall rains or as determined by weather patterns.

- Erosion control measures (waterbarring, seeding, mulching, straw bales, bioengineering, etc.) will be applied where needed on renovated roads or decommissioned spurs.

- All haul routes used during wet season hauling will be inspected prior to haul activities to assess the current conditions of those roads as they pertain to sedimentation concerns to adjacent streams. Where winter haul occurs along a rocked route with defined stream crossings, road design is currently adequate. Project design features that reduce sedimentation such as silt fences, gravel lifts, and weather dependant operation specifications will prevent sediment contribution to live streams. Activities will be suspended when conditions are such that meaningfully, measurable stream-sedimentation will occur. The suspension will be lifted when conditions improve or remediation measures are implemented.

- On very steep slopes (70 percent and greater) accessed by the rocked 24-7-18.1 road, no cable yarding shall be permitted, when soil moisture levels are high enough to squeeze water from soil samples. The soil would be too wet if cable yarding would create glazed imprints on the soil surface that would channel water downslope – generally greater than 30 percent soil moisture.

Project Design Features to Maintain Soil Productivity

- Ground-based operations will only occur when soil moisture conditions limit effects to soil productivity. These conditions generally occur between May 15th and October 15th. Soil moisture levels usually must be below 20 percent to a depth of ten inches. In some situations soil moisture levels would need to be considerably less than 20 percent. These situations would include low slash levels and adverse skid/forwarder haul up the steeper ground-based slopes. The Contract Administrator will approve all ground-based operation start-up dates. Stop work orders can be issued if unseasonably wet conditions develop during the dry season that increase soil moisture above acceptable levels.

- Forwarder and skid trails will be designated. The forwarder will operate on branch and limb covered areas traversed by the harvester.

- To mitigate for soil compaction, approximately 1.4 miles of new trails, old skid trails, old roadbed, and spur 3, will be sub-soiled. In addition, approximately 0.4 acres of area used to deck logs adjacent to landings will be subsoiled. Sub-soiled trails and roadbeds will be mulched with logging slash where available or with weed free straw if logging slash is not available. At each position the excavator locates to perform subsoiling, one bucketful of topsoil will be collected from the adjacent undisturbed area and will be scattered over the sub-soiled surface.

- Slash piles will be burned during the late fall to mid-spring season when the soil and duff layer moisture levels are high (ROD/RMP, pg. 140) and the large down logs have not dried. This practice will confine burn impacts to the soil underneath the piles and will lessen the depths of the impacts (i.e., loss of organic matter, and the change of soil physical properties, ecology and soil nutrients).

Project Design Features to Minimize Effects from Noxious Weeds

- Construction and logging equipment/machinery will be cleaned prior to moving into the proposed project site. Cleaning will remove weed seed and help control and prevent the spread of noxious weeds.

- Areas of ground disturbance will be mulched with logging slash. If logging slash is unavailable native grass seed or a suitable alternative (i.e., native straw, wood chips, etc.) would be applied following ground disturbance.

- Noxious weed infestations and results from ground disturbance mitigations at the project sites will be monitored.

Miscellaneous Project Design Features

- **Cultural resources -** A cultural resource inventory was completed (July, 2006). No cultural resources were identified. Stipulations will be placed in the contract to halt operations in the event of inadvertent discoveries of new cultural resource sites (e.g. historical or prehistorical ruins, graves, fossils or artifacts).

- **To prevent and report accidental spills of petroleum products or other hazardous material and provide for work site cleanup:** The operator will be required to comply with all applicable State and Federal laws and regulations concerning the storage, use and disposal of industrial chemicals and other hazardous materials. All equipment planned for in-stream work (e.g. culvert and/or ditch line upgrades) will be inspected beforehand for leaks. Accidental spills or discovery of the dumping of any hazardous materials will be reported to the Authorized Officer and the procedures outlined in the "Roseburg District Hazardous Materials (HAZMAT) Emergency Response Contingency Plan" will be followed. Hazardous materials (particularly petroleum products) will be stored in appropriate and compliant UL-Listed containers and located so that any accidental spill will be fully contained and will not escape to ground surfaces or drain into watercourses. Other hazardous materials such as corrosives and/or those incompatible with flammable storage shall be kept in appropriate separated containment. All construction materials and waste will be removed from the project area.

References

Daniel, T.W., J. Helms, and F. Baker. 1979. Principles of Siliculture. McGraw Hill Book Company, 2nd edition.

SECTION 3 – THE DECISION RATIONALE

This decision implements the guidance provided in the Upper Umpqua Watershed Plan Decision signed October 8, 2003 for that portion of the plan covering the Basin Shield project area. It incorporates the "adjustments made" as described in the Upper Umpqua Watershed Plan decision (pgs. 3-9).

The project design features listed above will minimize soil compaction, limit erosion, protect slope stability, protect wildlife, protect air and water quality, and protect fish habitat, as well as protect other identified resource values. I have reviewed the resource information contained in Table 2 "Summary of Effects of the Action" (below) and in Appendices A-J (available upon request from the Swiftwater Field Office). This decision recognizes that impacts could occur to some of these resources; however, the impacts to resource values will not exceed those identified in the *Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement* (PRMP/EIS, 1994). This decision provides timber commodities resulting from silvicultural treatments whose effects to the environment are within those anticipated and already analyzed in the RMP/EIS.

As a result of this decision, commercial thinning and density management actions will be undertaken to: (1) accelerate stand diversity and development of late-successional characteristics in mid-seral forests on BLM lands within the riparian area and (2) maintain healthy growth rates and contribute timber for the local and regional economy while protecting certain forest components for wildlife in stands on BLM LSR lands.

The variable moderate and high-residual density thinning will develop late-successional characteristics more quickly including multiple canopy layers, large trees with large limbs, and vegetative diversity. In the long-term, the quality of dispersal habitat for the northern spotted owl will improve, as well as provide future nesting habitat for the northern spotted owl and marbled murrelet

My predecessor reviewed the public comments from the EA (see Section 4, pg. 13) and provided additional time for interested parties to develop input and to participate in a field tour of the project area. This interactive participation resulted in substantive adjustments in the proposed action initially presented in the Upper Umpqua Watershed Plan EA. These adjustments were incorporated in the Upper Umpqua Watershed Plan Decision signed October 8, 2003 and subsequently in the project design features for this project.

Survey and Manage

The Bureau of Land Management (BLM) is aware of the August 1, 2005, U.S. District Court order in Northwest Ecosystem Alliance et al. v. Rey et al. which found portions of the *Final Supplemental Environmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines* (January, 2004) (EIS) inadequate. Subsequently in that case, on January 9, 2006, the Court ordered:

- set aside the 2004 Record of Decision *To Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern spotted Owl* (March, 2004) (2004 ROD) and
- reinstate the 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines* (January, 2001) (2001 ROD), including any amendments or modifications in effect as of March 21, 2004.

The Swiftwater Field Office does not expect that the litigation over the red tree vole and the Annual Species Review process in Klamath-Siskiyou Wildlands Center et al. v. Boody et al will affect this project, because the development and design of this project exempt it from the Survey and Manage program. In Northwest Ecosystem Alliance et al. v. Rey et al the U.S. District Court modified its order on October 11, 2006, amending paragraph three of the January 9, 2006 injunction. This most recent order directs:

"Defendants shall not authorize, allow, or permit to continue any logging or other ground-disturbing activities on projects to which the 2004 ROD applied unless such activities are in compliance with the 2001 ROD (as the 2001 ROD was amended or modified as of March 21, 2004), except that this order will not apply to:

a. Thinning projects in stands younger than 80 years old;
b. Replacing culverts on roads that are in use and part of the road system, and removing culverts if the road is temporary or to be decommissioned;
c. Riparian and stream improvement projects where the riparian work is riparian planting, obtaining material for placing in-stream, and road or trail decommissioning; and where the stream improvement work is the placement large wood, channel and floodplain reconstruction, or removal of channel diversions; and
d. The portions of project involving hazardous fuel treatments where prescribed fire is applied. Any portion of a hazardous fuel treatment project involving commercial logging will remain subject to the survey and management requirements except for

thinning of stands younger than 80 years old under subparagraph a. of this paragraph."

Since the Basin Shield Commercial Thinning and Density Management project will harvest 122 acres of forest stands that are 39-43 years old, it meets exemption "a" above. Therefore, it is my determination that the Basin Shield Commercial Thinning and Density Management treatment complies with remedies for Northwest Ecosystem Alliance vs. Rey, et.al. and Klamath Siskiyou Wildlands center vs. Boody, et.al.

In addition, Survey and Manage Species were considered in the Upper Umpqua Watershed Plan Environmental Assessment (pgs. 35-36, E-25 through E-26).

Aquatic Conservation Strategy (ACS) Compliance
In March 2007, the U.S. District Court, in Pacific Coast Federation of Fishermen's Association, et al. v. National Marine Fisheries Service, et al. and American Forest Resource Council, an Oregon nonprofit corporation, et. al. set aside the 2004 Final Supplemental Environmental Impact Statement for Aquatic Conservation Strategy (ACS FSEIS). The Upper Umpqua EA was written in 2003, according to the Northwest Forest Plan and prior to the 2004 ACS FSEIS. As such, the analysis within the Upper Umpqua EA addresses ACS in a Manner consistent with the March 2007 ruling.

- Standards and Guidelines, in effect in 2003 (prior to the 2004 ACS FSEIS), were adhered to when developing the project objectives and project design features (ROD/S&G, pgs. C-2 through C-3, C-11 through C-61) for application at the site level.
- The Upper Umpqua Watershed Plan (2003) is a combined watershed and environmental analysis. This plan contains the sixth and seventh field watersheds considered during the planning of this project.
- Cumulative effects were considered in the Upper Umpqua Watershed Plan (pgs. 20, 27-28, 32-33, and E-14).
- The Upper Umpqua Watershed Plan analyzed ACS objectives and does not retard or prevent the attainment of ACS objectives (in effect in 2003). The Basin Shield Commercial Thinning and Density Management project objective to accelerate stand diversity and development would maintain and restore the distribution, diversity, and complexity of watershed and landscape scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted. Appendix D of the Upper Umpqua Watershed Plan EA outlines how ACS objectives would be achieved or achievement of those objectives would not be precluded (pgs. D-1 through D-6).

I find the Basin Shield Commercial Thinning and Density Management complies with the ACS requirements set forth in the ROD/RMP (1994) and the subsequent District Court interpretations in the Pacific Coast Federation of Fisherman's Association (PCFFA) v. National Marine Fisheries Service (NMFS), 71 F. Supp. 2d 1063, 1069 (W.D. Wash. 1999).

SECTION 4 – PUBLIC INVOLVEMENT

For the Upper Umpqua Watershed Plan Environmental Assessment, comments were solicited from affected tribal governments, adjacent landowners and affected State and local government agencies. No comments were received from these sources. During the seventy-five day public

review period for the Upper Umpqua Watershed Plan, comments were received from four individuals or organizations. As previously described in Section 3, comments and subsequent interaction with the public helped formulate the Upper Umpqua Watershed Plan decision (October 8, 2003) and is reflected in both that decision (pgs. 3-9) and in the project design features for this project as described here (April 20, 2007).

Specific notification was available through the Spring 2007 and Summer 2007 Quarterly Planning Updates. No comments or information have been received pertaining to the design of Basin Shield Commercial Thinning and Density Management project.

SECTION 5 – PROTEST PROCEDURES

The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR § 5003 Administrative Remedies, protests of this decision may be filed with the authorized officer [Marci Todd] within 15 days of the publication date of the notice of decision/timber sale advertisement in *The News-Review*, Roseburg, Oregon.

43 CFR § 5003.3 subsection (b) states that: "Protests shall be filed with the authorized officer and shall contain a written statement of reasons for protesting the decision." This precludes the acceptance of electronic mail or facsimile protests. Only written and signed hard copies of protests that are delivered to the Roseburg District Office will be accepted. The protest must clearly and concisely state the reasons why this decision is believed to be in error.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, be advised that your entire comment –including your personal identifying information –may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

Protests received more than 15 days after the publication of the notice of decision/timber sale advertisement are not timely filed and shall not be considered. Upon timely filing of a protest, the authorized officer shall reconsider the decision to be implemented in light of the statement of reasons for the protest and other pertinent information available to her. The authorized officer shall, at the conclusion of her review, serve her decision in writing to the protesting party. Upon denial of a protest the authorized officer may proceed with the implementation of the decision.

For further information, contact Marci Todd, Field Manager, Swiftwater Field Office, Roseburg District, Bureau of Land Management, 777 NW Garden Valley Blvd; Roseburg, OR. 97470, 541 440-4931.

_____ _____

Marci L. Todd, Field Manager Date
Swiftwater Field Office

Table 2. Summary of Effects of the Action: Basin Shield Commercial Thinning and Density Management.

Context (What?)	Intensity (How Much?)	Reason for not being Significant.
Cultural Resources		
Cultural Resources.	Surveys were conducted (July, 2006) for cultural resources and Section 106 responsibilities under the National Historic Preservation Act were completed, in accordance with the 1998 Oregon State Historic Preservation Office protocols. No cultural or historic resources were identified.	There will be no impacts to cultural or historical resources.
Botany & Noxious Weeds (refer to *Appendices B* for details)		
Federally threatened (FT) **Kincaid's lupine** and the federally endangered (FE) **rough popcorn flower**.	Surveys were completed (May, 2006) and no sites were discovered.	No impacts to these two federally listed plant species will occur since there are no known sites within the project area.
Survey & Manage (S&M) Species.	Basin Shield Commercial Thinning and Density Management meets one of the exemption criteria for Survey and Manage from the October 11, 2006 U.S. District Court Order (pgs. 12-13).	Basin Shield Commercial Thinning and Density Management is exempt from survey and manage requirements (October 11, 2006 U.S. District Court Order, pgs. 12-13).
Bureau Sensitive (BS) and **Assessment (BA).**	Surveys were completed (May 2007) and no sites were discovered.	No impacts to BS and BA botanical species will occur since there are no known sites within the project area.
Bureau Tracking (BT) Species	Surveys were completed (May, 2007)	1 BT species site was located, information documented, no management required.
Noxious weeds: Himalayan blackberry and Scotch broom occur in the project area.	All roads in this sale have scattered patches of Himalayan blackberry (approx. 1 acre) and Scotch broom (approx. 3 acres).	The roads have been treated both chemically and mechanically in FY2005. The project area will be monitored for treatment effectiveness and follow-up treatments will be conducted as necessary. The project design features will minimize the spread of noxious weeds.

Context (What?)	Intensity (How Much?)	Reason for not being Significant.
Fisheries (refer to *Appendix C* for details)		
Oregon Coast Coho Salmon (NMFS determined that the Oregon Coast coho ESU does not warrant listing under the ESA at this time and therefore withdrew the proposed listing [Fed. Reg., Vol. 71 No. 12, Jan. 19, 2006]). However, under OR/WA BLM guidelines, the coho is considered Bureau Sensitive.	Prior to NMFS's determination, the Roseburg District made a determination that this project will result in a "may effect, not likely to adversely affect [NLAA]" in the Upper Umpqua Watershed Density Management Plan Biological Assessment (Sept. 30, 2005) prepared for consultation with NMFS.	Project will not adversely affect the Oregon Coast Coho Salmon.
Essential Fish Habitat (EFH) for Coho Salmon and Chinook salmon.	Conservation measures incorporated into the project design features will prevent adverse effects to essential fish habitat.	Project will not adversely affect essential fish habitat. Therefore, consultation with National Marine Fisheries Service is not required.
Bureau Sensitive (BS), Assessment (BA), and **Tracking (BT) Species**.	Oregon Coast coho salmon (BS) and coastal cutthroat (BT) are documented within the project area. Umpqua chub (BS) and Pacific lamprey (BT) are suspected downstream of the project area.	Project design features will minimize soil erosion and sedimentation effects to aquatic species and aquatic habitat.
Hydrology (refer to *Appendix D and E* for details)		
Peak Flows within the Analytical Hydrologic Units (AHU).	Commercial thinning and density management is not expected to have any measurable impact on peak flow within fish-bearing waters below the treatment areas. At the project level there may be increases in peak flows during smaller storm events (less than two year interval) in small non-fish bearing streams.	No measurable change in peak flows.
Sedimentation.	Project design features will minimize soil erosion and sedimentation effects to aquatic species and aquatic habitat. Sediment produced, as a result of haul, will be of such small magnitude that it will not be meaningfully measurable.	Sedimentation will be maintained below meaningfully measurable levels or haul will be suspended.

Context (What?)	Intensity (How Much?)	Reason for not being Significant.
Soils (refer to *Appendix F* for details)		
Mass Wasting and **Landslides.**	In the short-term (less than ten years following harvest), the probability of landslide occurring on about ten acres of steep slopes will be in the low to moderate range (less than 30 percent). Any landslides that occur will likely be few in number and less than 0.15 acres in size.	The probability of landslide occurrence will be slightly higher than the No Action Alternative. Assuming 1 to 3 landslides, each less than 0.15 acres in size would occur, less than two percent of the steep ten acres would experience a long-term decrease in soil productivity (This productivity loss would be in the upper part of the landslides where soil material is removed.) About four of the steep ten acres is situated where landslides less than 0.15 acres in size could reach streams. Only one of the ten steep acres (Unit 4) is situated where these landslides could directly impact the one fish bearing stream. Heavier tree retention and helicopter logging on this one acre will reduce the risk (see Exhibit C).
Soil Productivity.	Following timber treatment and subsequent subsoiling as described above (pg. 5 & 10), it is estimated that there will be a net decrease in soil productivity in the short-term (less than ten years) (see Appendix C, Table 3).	Sub-soiling will accelerate the long-term recovery of soil-productivity, because old, compacted road and trail surfaces are included in the subsoiling. There will be a net increase in soil productivity over the long-term (ten years or more)
Wildlife (refer to *Appendices G, H, I,* and *J* for details).		
In accordance with the Endangered Species Act, **consultation** with the U.S. Fish and Wildlife Service (USFWS) has been completed for the federally threatened (FT) bald eagle, northern spotted owl, and marbled murrelet and for spotted owl critical habitat and	A letter of concurrence from the USFWS for the re-initiation of consultation on Roseburg District Bureau of Land Management FY 2005-2008 Management Activities (Ref. # 1-15-05-I-0511) was received June 24.	The USFWS concurred that this action is *not likely to adversely affect* the bald eagle, northern spotted owl, northern spotted owl critical habitat, marbled murrelet, and marbled murrelet critical habitat (pg. 30 [Ref. # 1-15-05-I-0511). Project design features will be

Context (What?)	Intensity (How Much?)	Reason for not being Significant.
murrelet critical habitat.		implemented in compliance with the letters of concurrence.
Noise/Visual Disruption of Northern Spotted Owl nesting behaviors.	No noise/visual disruption effects to spotted owls will result from this action since there are no known spotted owl nests, activity centers, or unsurveyed suitable habitat within one mile of the harvest units.	No disruption effects to spotted owls will occur.
Northern Spotted Owl Habitat. There are four northern spotted owl sites (includes nine activity centers) that are located within 1.5 miles (*Coast Range provincial home range*) of the proposed harvest unit. The South McGee (MSNO 2299A) site has an established 100-acre Known Owl Activity Center (KOAC).	Commercial thinning and density management will degrade 122 acres of dispersal habitat but will not alter the ability of that stand to function as dispersal habitat. Since the treated stands will not be modified below 40 percent canopy cover, the stands will still function as dispersal habitat. No suitable habitat will be modified or removed.	Commercial thinning and density management of 122 acres of mid-seral forest habitat will improve the quality of dispersal habitat within 5-10 years. Density management within the 41 acres of Riparian Reserves and 37 acres of Late-successional reserve will diversify the forest for spotted owl use by developing larger diameter trees with multiple canopy layers. Beneficial effects to dispersal habitat from commercial thinning and density management will persist until the upland Matrix portions of the stands undergo final harvest in the future. The USFWS concurs that this action *is not likely to adversely affect* spotted owls (pg. 19) [Ref. # 1-15-05-I-0511].
Critical Habitat for the Northern Spotted Owl. This project is located within designated critical habitat unit OR-58 for the northern spotted owl.	Commercial thinning and density management will degrade 38.5 acres of dispersal habitat within designated Critical Habitat. Thinning treatments will maintain canopy cover above 40 percent. Therefore, the stand will continue to provide sufficient primary	Because the primary constituent elements present in dispersal habitat will persist post-treatment, the USFWS concurs that this action *is not likely to adversely affect* spotted owls (pg. 28) [Ref. # 1-15-05-I-0511].

Context (What?)	Intensity (How Much?)	Reason for not being Significant.
	constituent elements for spotted owl dispersal. No suitable habitat will be modified or removed.	
Noise/Visual Disruption of Marbled Murrelet nesting behaviors. The project area is located approximately 34.6 miles from the coast, within Zone 1.	There is unsurveyed suitable habitat adjacent to a portion of proposed units 2, 3, 4, and 5. The project area is located approximately 2.2 miles from the nearest known occupied marbled murrelet site (Eagleview [MSNO-R3005]).	To avoid disturbance impacts to the marbled murrelet, seasonal restrictions from April 1st thru August 5th, and Daily Operating Restrictions (two hours after sunrise to two hours prior to sunset) from August 6th thru September 15th will be implemented within 100 yards of unsurveyed suitable habitat. The USFWS concurs that the commercial thinning and density management activities *are not likely to adversely affect* marbled murrelets (pg. 16 [Ref. # 1-15-05-I-0511]).
Marbled Murrelet Habitat.	Suitable nesting habitat will not be removed within or adjacent to the project area. Within the stands prescribed for density management and thinning treatment under this decision, surveys for trees with suitable platform structures were conducted (September 2006) following the Residual Habitat Guidelines (USDI 2004).	Commercial thinning and density management will facilitate the development of future nesting habitat by increasing tree and limb growth rates; fostering the development of nesting platforms. In addition, thinning younger trees from around the older, large limbed trees will allow greater access for nesting providing an opportunity for murrelets to occupy these stands earlier. The USFWS concurs that the commercial thinning and density management activities *are not likely to adversely affect* marbled murrelets

Context (What?)	Intensity (How Much?)	Reason for not being Significant.
		(pg. 10 [Ref. # 1-15-05-I-0511]).
Critical Habitat for the Marbled Murrelet. This project is located within designated critical habitat unit OR-04-*e* for the marbled murrelet.	Within the stands prescribed for commercial thinning and density management under this decision, surveys for trees with suitable platform structures were conducted (September 2006) following the Residual Habitat Guidelines (USDI 2004). Commercial thinning and density management will degrade 38.5 acres of designated critical habitat. Thinning treatments will maintain canopy cover above 40 percent. No suitable habitat will be removed.	Based on compliance with the Guidelines for stands with potential murrelet nesting habitat, commercial thinning and density management activities are not expected to measurably affect the primary constituent elements of critical habitat because the potential murrelet nesting structure will be excluded from the treatment area or protected within the treatment area. Thinning activities within critical habitat are intended to improve forest health conditions or facilitate the development of structural characteristics of unsuitable habitat, and is consistent with recovery actions described in the Marbled Murrelet Recovery Plan (recovery action 3.2.1.3). Because primary constituent elements will not be removed, the USFWS concurs that this action *is not likely to adversely affect* marbled murrelets (pg. 16) [Ref. # 1-15-05-I-0511].
Survey & Manage (S&M) Species.	Basin Shield Commercial Thinning and Density Management meets one of the exemption criteria for Survey and Manage from the October 11, 2006 U.S. District Court Order (refer to pgs. 12-13 for details).	The decision to eliminate Survey and Manage is effective on this project (October 11, 2006 U.S. District Court Order, pgs. 12-13).
American Peregrine Falcon (Bureau Sensitve)	Suitable habitat for the peregrine falcon is present within less than three miles of	The action will not affect the forage opportunities or quality for the peregrine

Context (What?)	Intensity (How Much?)	Reason for not being Significant.
	the proposed project area. Peregrines may forage for avian prey within the project area.	falcon in a measurable way.
Bald Eagle. (Bureau Sensitive) On July 9, 2007, the bald eagle was delisted from the Federal "threatened" list under the Endangered Species Act (FR 72; No 130; 37346-37372). Therefore, the bald eagle is placed on the Bureau Sensitive Species list.	No noise/visual disruption effects to bald eagles will occur due to this action since there are no known nests within one mile of the harvest units. Based on 2006 surveys, the nearest nest site (Lost Creek) is approximately 1.7 miles away. No suitable habitat will be removed or modified.	No disruption effects to bald eagles will occur and suitable nesting habitat will not be modified.
Northern Goshawk (Bureau Sensitive)	Suitable habitat for the northern goshawk is mature and old-growth conifer forests, and is present within the project area, adjacent to proposed units. There are no known sites within the project area. Goshawks are expected to forage for avian prey within the units.	The action will not remove or modify adjacent suitable habitat. Thinning treatment of mid seral stands will modify habitat by reducing tree densities which will allow for greater maneuverability of goshawks through the stand while in pursuit of avian prey.
Northwestern Pond Turtle (Bureau Sensitve)	Suitable habitat for the pond turtle is present in the mainstem Umpqua river located 1247 feet south of the proposed project area. Pond turtles may overwinter in the upland habitat.	The action will not affect upland overwintering habitat in a measurable way.
Purple Martin (Bureau Sensitive).	The harvest units do not contain suitable habitat (e.g. open areas with snags) for purple martins. Purple martins may forage over the canopy of the existing stand.	The action will not affect the forage opportunities or quality for purple martins in a measurable way.
Spotted Tail-dropper (Bureau Sensitive).	The harvest units contain habitat suitable for the spotted tail-dropper (e.g. moist coniferous forest with a substantial hardwood component), but there are no known sites within the project area.	No impact to the spotted tail-dropper will occur since the post-treatment stand condition appears to fall within the range of suitability for this species and its con-specifics.
Townsend's Big-eared Bat (Bureau	The harvest units do not contain suitable	The action will not affect the forage

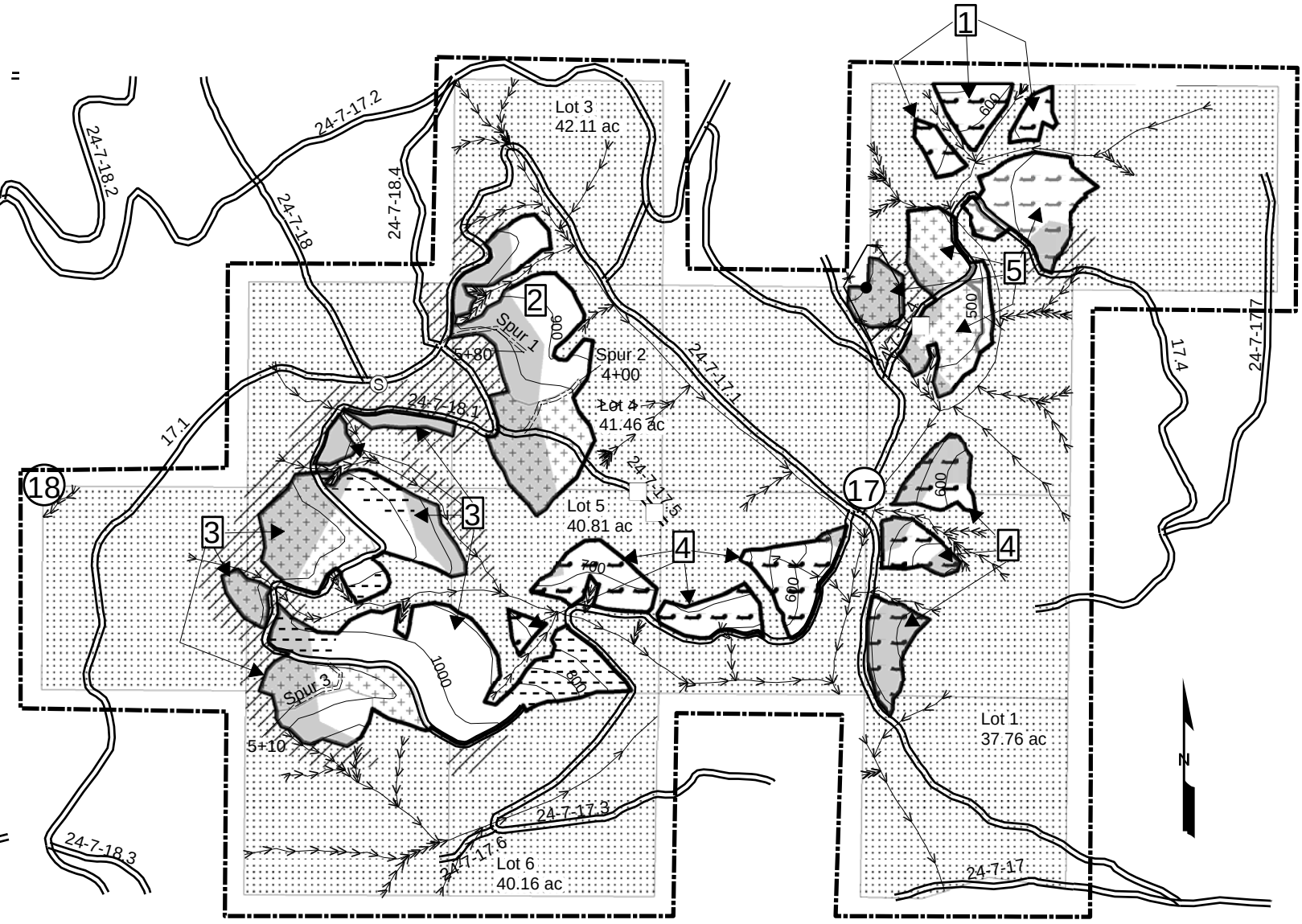
Context (What?)	Intensity (How Much?)	Reason for not being Significant.
Sensitive)	habitat (e.g. late-successional forest associated with water; caves, rock crevices) for Townsend's big-eared bats. Suitable habitat is adjacent to the project area.	opportunities or quality for Townsend's big-eared bats in a measurable way.
Remaining **Bureau Sensitive** (BS) and **Bureau Assessment** (BA) Species.	Evaluation of the remaining BS and BA wildlife species was completed in May 2007 and no known sites or concerns were identified (except for the American peregrine falcon, northern goshawk, northwestern pond turtle, purple martin, spotted tail-dropper, and Townsend's big-eared bat as discussed above).	No impacts to the remaining BS or BA wildlife species will occur since there are no known sites within the project area.
Bureau Tracking (BT) Species.	There are known detections of BT species, including clouded salamander, sharptail snake, and several myotis bat species within or within close proximity to the project area (ONHP 2007).	Districts are encouraged to collect occurrence data on BT species but they will not be considered as Special Status Species for management purposes (IM-OR-2003-054).

U.S. Department of Interior
Bureau of Land Management

EXHIBIT "A"

Basin Shield CT/DM
Sale No. 07-08

District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	*24S*	*7W*	*17&18*	*WILLAMETTE*	*OR-10-TS07-08*



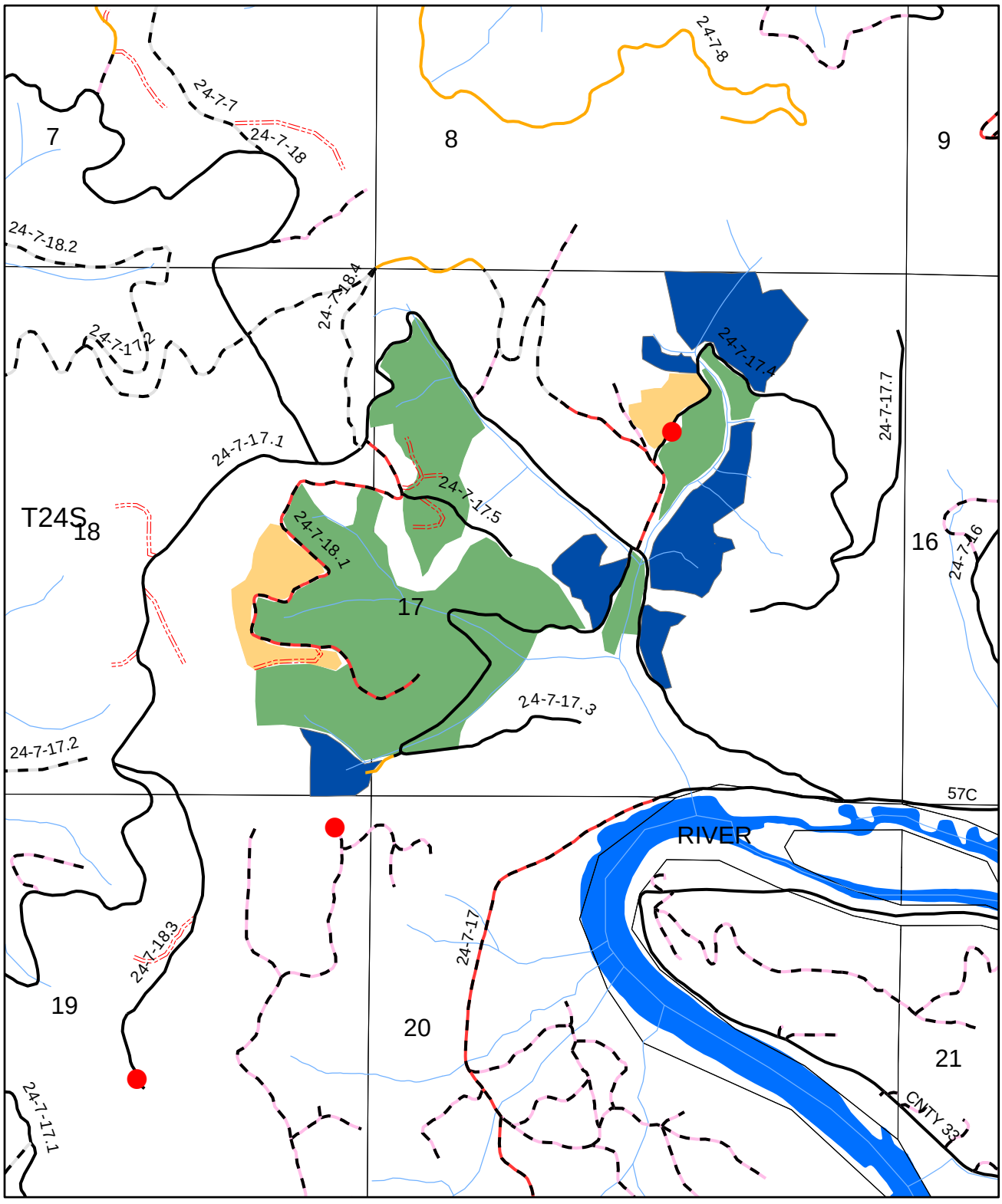
LEGEND

Scale: 1" = 1000 ft

- Harvest Area - Cable Yarding
- Harvest Area - Ground Based
- Harvest Area - Helicopter
- Reserve Area
- Marbled Murrelet Seasonally Restricted Operations Area
- Marbeled Murrelet Habitat Area
- Found Corner
- Stream
- Spur To Be Constructed
- Boundary of Cutting Area
- Boundary of Contract Area
- Existing Rocked Roads
- Soil Moisture Restriction

ExHibit "B" Basin Shield

Timber Sale Photo Plan & Road Map (as of Nov. 17, 2006)



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Basin Shield Log Systems
- CABLE
- GROUND
- HELICOPTER
- Streams 2nd Order +
- Sections
- Township, Range
- Potential Helicopter Landings

Legend
- New Road Construction

Existing Roads

Closure Status, SurfaceType
- Closure or Surface Unknown
- Closed (Could Reopen), Rock or Paved Road
- Closed Roads (Rock & Dirt)
- Open, Dirt or Unknown Road
- Open, Rock or Paved Road
- Streams 2nd Order +